

## Hepatitis A Surveillance in Connecticut 2015-2019

Hepatitis A infection is a highly contagious acute infection of the liver caused by the hepatitis A virus (HAV). The virus is primarily spread from person to person by the fecal-oral route, and household or sexual contacts of cases are at risk of becoming infected. Common signs and symptoms include fatigue, fever, malaise, diarrhea, loss of appetite, nausea, abdominal pain, dark urine, and jaundice. Some people do not have symptoms, others can experience a mild illness and recover within a couple of weeks, while still others develop more severe symptoms and may take months to fully recover (1).

The Connecticut Department of Public Health (CT DPH) uses the current [National Surveillance Case Definition](#) to classify hepatitis A cases (2). The clinical criteria used to define hepatitis A cases include an acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, abdominal pain, or dark urine) AND (a) jaundice or elevated total bilirubin levels  $\geq 3.0$  mg/dl, OR (b) elevated serum alanine aminotransferase (ALT) levels  $>200$  IU/L, AND (c) the absence of a more likely diagnosis. The laboratory criteria for diagnosis includes a positive immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV), OR a positive nucleic acid amplification test (NAAT; such as polymerase chain reaction [PCR] or genotyping) for hepatitis A virus RNA. A confirmed case is classified as a case that meets the clinical criteria and is IgM anti-HAV positive, OR a case that has hepatitis A virus RNA detected by NAAT (such as PCR or genotyping), OR a case that meets the clinical criteria and occurs in a person who had contact (e.g., household or sexual) with a laboratory-confirmed hepatitis A case 15-50 days prior to onset of symptoms, AND not otherwise ruled out by negative IgM anti-HAV or negative hepatitis A virus NAAT testing performed by a public health laboratory. Laboratory reports that do not result in a confirmed case are classified as non-cases.

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In Connecticut, positive Immunoglobulin M antibodies to HAV (IgM anti-HAV) results are a laboratory reportable finding and [HAV infection is a provider reportable disease](#). When a positive test result is received by CT DPH, follow-up is conducted with provider offices and infection control practitioners. If clinical findings result in a confirmed case, a telephone interview of the case patient is conducted by CT DPH staff using a standardized questionnaire. During the interview, the case is asked about symptom onset, specific symptoms experienced, occupation, food exposures, travel, and other questions important to identifying potential exposures. In addition, close contacts of the patient are encouraged to receive post exposure prophylaxis within 14 days of exposure to the case while infectious.

During 2015-2019, CT DPH received and conducted follow-up for 566 positive anti-HAV IgM reports, of which 74 (13%) were classified as confirmed cases and 492 (87%) were classified as non-cases (Figure 1). Further analyses were conducted on confirmed cases.

Statewide annual incidence rates ranged from a low of 0.25 cases per 100,000 population in 2015 to a high of 0.50 cases per 100,000 population in 2019. Compared to 2011 when the last published incidence showed a rate of 0.46 cases per 100,000 population, the cumulative average incidence rate for 2015-2019 was 0.41 per 100,000 population (3,4).

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Cases ranged from 2 to 87 years of age with a median age of 48 years, with the highest proportion reported in those aged 50-59 years (24%); 48 (65%) were male. Race information was collected and included 52 (70%) White, 3 (4%) Asian, 1 (1%) Black or African American, 3 (4%) Other, and 15 (20%) unknown. Ethnicity was also collected in 73 (99%) cases and 13 (17%) identified as Hispanic/Latino. No cases reported having received hepatitis A vaccine.

Symptoms reported included 47 (64%) loss of appetite, 43 (58%) malaise, 43 (58%) dark urine, 42 (57%) jaundice, 39 (53%) nausea, 36 (49%) fever, 33 (45%) abdominal pain, 29 (39%) diarrhea, 24 (32%) vomiting, and 19 (26%) headache. Cases could have had more than one symptom. Additional symptoms such as bloating, chills, fatigue, weakness, and body aches were also reported. There were 43 (58%) hospitalizations; no deaths were reported.

Of the 74 cases, 26 (35%) reported international travel within 3 months prior to symptom onset, 19 (26%) consumed raw shellfish, 3 (4%) had contact with a person who traveled internationally, 3 (4%) used illicit injectable drugs, 3 (4%) were men having sex with men (MSM), and 1 (1%) used non-injectable illicit drugs. There were no reports of known contact with someone with infectious hepatitis A. There were 9 (12%) cases that reported working in “high-risk” occupations: 4 (6%) healthcare employees with direct patient care, and 2 (3%) as an employee or an attendee of a daycare center, nursery, or preschool.

## Editorial

In the United States, hepatitis A rates decreased by more than 95% from 1996, when the vaccine was introduced, through 2011 (5). Nationally, cases started to increase in 2016, when large person-to-person outbreaks began to occur (1). Over time, the CDC has changed the national surveillance case definition. Results of liver enzyme tests, clinical findings, and other key factors used to classify a case were modified. In Connecticut, during 2015-2019, 87% of positive anti HAV-IgM tests resulted in a non-case after follow-up was conducted. CT DPH investigations determined more than 50% of non-cases were screened for HAV as part of routine blood work.

Certain groups of people are at higher risk for HAV infection. People who travel internationally and are unvaccinated are at a greater risk of getting HAV infection. In Connecticut, international travel was the predominant risk factor among cases. The CDC encourages all international travelers to get vaccinated to reduce their risk of contracting the disease (6). Other groups who are at increased risk for HAV infection are MSM, people who use illicit injection or non-injection drugs, people with occupational risk for exposure, and people experiencing homelessness. Healthcare workers and food workers who develop infection pose a greater risk to infect others and can cause outbreaks if proper control measures are not put in place.

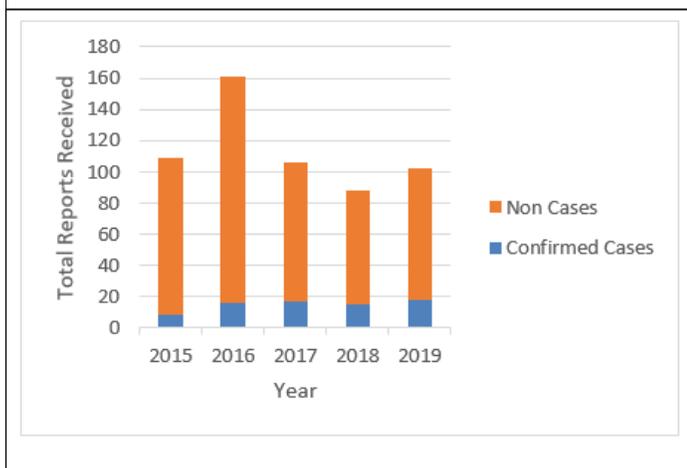
Providers are encouraged to screen for HAV infection and test for HAV among patients at increased risk including having recent international travel, as well as those who show signs or symptoms. If providers have any questions or concerns about a positive hepatitis A patient, they are encouraged to call the Epidemiology and Emerging Infections Program at 860-509-7994.

The best way to prevent hepatitis A is to get vaccinated. Hand washing and good hygiene are essential to helping stop the spread of this disease (1). Acute cases require immediate follow-up to identify close contacts and reduce the potential of further transmission of disease.

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**Figure 1. Total number of hepatitis A reports, Connecticut, 2015-2019**



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## Provider perceptions of decreases in cervical cancer screening and follow-up during the COVID-19 pandemic, March-October, 2020

Cervical cancer is a preventable disease caused by human papillomavirus (HPV) (1). Early signs of cervical cancer can be identified via screening, and effective treatment can be utilized if precancerous lesions are detected (2). Unfortunately, there is evidence cervical cancer screenings, like most non-urgent medical care, have been reduced during the COVID-19 pandemic(3).

The objectives of this analysis were to: (1) determine the perception of decreases in the frequency of cervical cancer screening and subsequent follow-up of abnormal screening results due to the COVID-19 pandemic in Connecticut as reported by health care providers, and (2) assess whether changes observed were due to decreases in provider capacity or due to patient scheduling. Medical practices specializing in obstetrics and gynecology (OBGYN) and family medicine or internal medicine (FM/IM) in Connecticut were surveyed. Surveys were sent in October, 2020 with up to two subsequent follow-up notifications. Practices who reported conducting screening and follow-up of abnormal results (defined as further screening or treatment) were asked to indicate the impact of COVID-19 on frequency of screening and follow-up during each month, March through October, 2020 compared to pre-pandemic levels. Respondents were also asked to identify whether any reduction in screening or follow-up was due to reduced capacity to see patients, patients not scheduling appointments, or both.

Of 151 medical practices surveyed, 39 (26%) responded. All OBGYN practices reported conducting cervical cancer screening and follow-up of abnormal screening results.

Among FM/IM providers, 13 (59%) reported conducting cervical cancer screening, and none reported conducting follow-up.

Most OBGYN practices reported the COVID-19 pandemic impacted the number of patients screened (15/17, 88%). The majority observed a decrease in screening in March through June; in April, all practices reported at least “somewhat fewer patients screened” (Figure 1). Most practices (10/15, 67%) reported reductions in screening were due to both patients not scheduling appointments and a reduced capacity of the practice to see patients. Three practices (20%) reported the reduction was due only to reduced capacity and two (13%) reported the reduction was due solely to patients not scheduling. Notably, in May through October, up to 5 (33%) practices in any given month reported more patients screened compared to pre-pandemic levels.

Ten (59%) of the OBGYN practices also reported a reduced number of patients returning for follow-up (Figure 2), typically in March through June and peaking at all ten practices reporting a reduction in April. Six practices (60%) reported the reduction in follow-up was due to both patients not scheduling and reduced practice capacity. Two practices (20%) reported the reduction was due only to reduced capacity and two (20%) reported the reduction was due solely to patients not scheduling. Starting in June and continuing through October, up to two practices (20%) per month began to see a higher number of patients followed up compared to pre-pandemic levels.

Of FM/IM practices conducting cervical cancer screening, 7 (54%) reported the pandemic impacted the number of patients screened. Most practices observed at least “somewhat fewer patients” during all months, and no FM/IM practices reported “more patients screened” compared to pre-pandemic levels. Three practices (43%) reported the reduction in patients screened was due to patients not scheduling. No practices reported the reduction was due exclusively to a reduced capacity. Two practices (29%) reported it was due to “both”, and two (29%) did not respond to the question.

### Discussion

On March 10, 2020, the Governor of Connecticut declared COVID-19 a Public Health Emergency. Shortly after, on March 20, 2020, the “Stay Safe, Stay Home” policy was implemented, leading to the shutdown of non-essential businesses. Although this policy did not include outpatient medical practices, results show that the volume of cervical cancer screenings and follow-up was impacted at the time of the policy's implementation. Phase 1 Reopening began on May 20, 2020, allowing some non-essential businesses to resume services. This reopening aligned with some providers reporting “more patients screened” compared to pre-pandemic levels beginning in May. However, not all practices reported this increase.

Most OBGYN and FM/IM providers reported the reduction in screening and follow-up during the pandemic was caused in part by patients not scheduling appointments, suggesting future interventions for “catch up” of screening and follow-

up will need to go beyond ensuring availability of services. Public health professionals will need to work with medical practitioners to identify and reach patients who have missed screening or follow-up of abnormal results to ensure there are no further delays in care. Risk-based prioritization of screening has also been recommended, for example in settings with limited capacity or significant disruptions to care (4).

There may be an increase in prevalence of precancerous lesions and cervical cancer in the coming years if no interventions are put in place. Burger et al. (5) recently published findings from a model that demonstrate disruptions in screening are expected to result in increases in cervical cancer rates by 2027. Notably, the model suggests interventions should utilize co-testing (cervical pathology with HPV-testing) when appropriate and focus on patients missing follow-up from abnormal primary screening to limit increases in cervical cancer.

Survey results indicate that providers are aware of the disruption caused by COVID-19, and that missed screenings and follow-up were due to patient behavior as well as provider capacity. Providers will be critical stakeholders in getting missed patients back into the clinic, as well as prioritizing resources to focus on those patients most at risk. Public health practitioners must work with medical professionals to ensure this reduction in screening and follow-up does not lead to preventable increases in cervical cancer in the coming years.

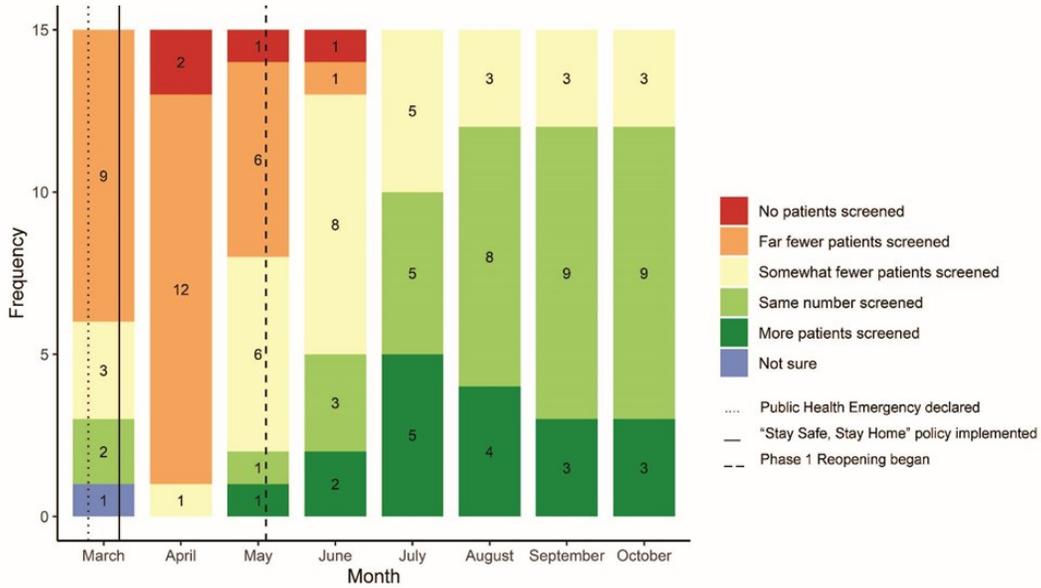
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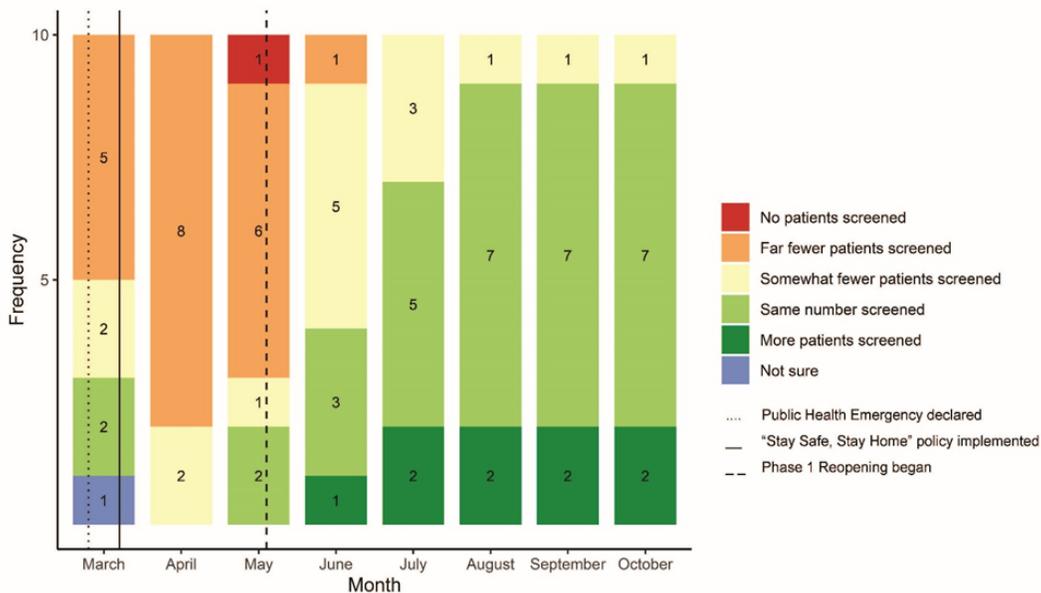
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**Figure 1. Changes in frequency of patients screened for cervical cancer in OBGYN practices during March-October 2020**



**Figure 2. Changes in frequency of patients followed up (further screening or treatment) after abnormal cervical cancer screening results in OBGYN practices during March-October, 2020**



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